



PCT10

ENTERED

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/018,228A

DATE: 07/17/2002

TIME: 09:11:24

Input Set : A:\EP.txt

Output Set : N:\CRF3\07172002\J018228A.raw

5 <110> APPLICANT: Lex M. Cowsert
6 ISIS PHARMACEUTICALS, INC.
8 <120> TITLE OF INVENTION: ANTISENSE MODULATION OF G-ALPHA-S1 EXPRESSION
W--> 9 <130> FILE REFERENCE: RTSP-0061
C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/018,228A
C--> 11 <141> CURRENT FILING DATE: 2002-06-03
11 <150> PRIOR APPLICATION NUMBER: 09/344,914
12 <151> PRIOR FILING DATE: 1999-06-25
14 <160> NUMBER OF SEQ ID NOS: 87
16 <210> SEQ ID NO: 1
17 <211> LENGTH: 1516
18 <212> TYPE: DNA
19 <213> ORGANISM: Homo sapiens
21 <220> FEATURE:
22 <221> NAME/KEY: CDS
23 <222> LOCATION: (13)..(1155)
25 <400> SEQUENCE: 1
26 gccgcgcgcgcg cc atg ggc tgc ctc ggg aac agt aag acc gag gac cag 48
27 Met Gly Cys Leu Gly Asn Ser Lys Thr Glu Asp Gln
28 1 5 10
30 cgc aac gag gag aag gcg cag cgt gag gcc aac aaa aag atc tag aag 96
31 Arg Asn Glu Glu Lys Ala Gln Arg Glu Ala Asn Lys Lys Ile Glu Lys
32 15 20 25
34 cag ctg cag aag gac aag cag gtc tac cgg gcc acg cac cgc ctg ctg 144
35 Gln Leu Gln Lys Asp Lys Gln Val Tyr Arg Ala Thr His Arg Leu Leu
36 30 35 40
38 ctg ctg ggt gct gga gaa tct ggt aaa agc acc att gtg aag cag atg 192
39 Leu Leu Gly Ala Gly Glu Ser Gly Lys Ser Thr Ile Val Lys Gln Met
40 45 50 55 60
42 agg atc ctg cat gtt aat ggg ttt aat gga gac agt gag aag gca acc 240
43 Arg Ile Leu His Val Asn Gly Phe Asn Gly Asp Ser Glu Lys Ala Thr
44 65 70 75
46 aaa gtg cag gac atc aaa aac aac ctg aaa gag gcg att gaa acc att 288
47 Lys Val Gln Asp Ile Lys Asn Asn Leu Lys Glu Ala Ile Glu Thr Ile
48 80 85 90
50 gtg gcc gcc atg agc aac ctg gtg ccc ccc gtg gag ctg gcc aac ccc 336
51 Val Ala Ala Met Ser Asn Leu Val Pro Val Glu Leu Ala Asn Pro
52 95 100 105
54 gag aac cag ttc aga gtg gac tac atc ctg agt gtg atg aac gtg cct 384
55 Glu Asn Gln Phe Arg Val Asp Tyr Ile Leu Ser Val Met Asn Val Pro
56 110 115 120
58 gac ttt gac ttc cct ccc gaa ttc tat gag cat gcc aag gct ctg tgg 432
59 Asp Phe Asp Phe Pro Pro Glu Phe Tyr Glu His Ala Lys Ala Leu Trp

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60	125	130	135	140	
62	gag gat gaa gga gtg cgt gcc tgc tac gaa cgc tcc aac gag tac cag				480
63	Glu Asp Glu Gly Val Arg Ala Cys Tyr Gln Arg Ser Asn Glu Tyr Gln				
64		145	150	155	
66	ctg att gac tgt gcc cag tac ttc ctg gac aag atc gac gtg atc aag				528
67	Leu Ile Asp Cys Ala Gln Tyr Phe Leu Asp Lys Ile Asp Val Ile Lys				
68		160	165	170	
70	cag gct gac tat gtg ccg agc gat cag gac ctg ctt cgc tgc cgt gtc				576
71	Gln Ala Asp Tyr Val Pro Ser Asp Gln Asp Leu Leu Arg Cys Arg Val				
72		175	180	185	
74	ctg act tct gga atc ttt gag acc aag ttc cag gtg gac aaa gtc aac				624
75	Leu Thr Ser Gly Ile Phe Glu Thr Lys Phe Gln Val Asp Lys Val Asn				
76		190	195	200	
78	ttc cac atg ttt gac gtg ggt gcc cag cgc gat gaa cgc cgc aag tgg				672
79	Phe His Met Phe Asp Val Gly Gly Gln Arg Asp Glu Arg Arg Lys Trp				
80		205	210	215	220
82	atc cag tgc ttc aac gat gtg act gcc atc atc ttc gtg gtg gcc agc				720
83	Ile Gln Cys Phe Asn Asp Val Thr Ala Ile Ile Phe Val Val Ala Ser				
84		225	230	235	
86	agc agc tac aac atg gtc atc cgg gag gac aac cag acc aac cgc ctg				768
87	Ser Ser Tyr Asn Met Val Ile Arg Glu Asp Asn Gln Thr Asn Arg Leu				
88		240	245	250	
90	cag gag gct ctg aac ctc ttc aag agc atc tgg aac aac aga tgg ctg				816
91	Gln Glu Ala Leu Asn Leu Phe Lys Ser Ile Trp Asn Asn Arg Trp Leu				
92		255	260	265	
94	cgc acc atc tct gtg atc ctg ttc ctc aac aag caa gat ctg ctc gct				864
95	Arg Thr Ile Ser Val Ile Leu Phe Leu Asn Lys Gln Asp Leu Leu Ala				
96		270	275	280	
98	gag aaa gtc ctt gct ggg aaa tcg aag att gag gac tac ttt cca gaa				912
99	Glu Lys Val Leu Ala Gly Lys Ser Lys Ile Glu Asp Tyr Phe Pro Glu				
100		285	290	295	300
102	ttt gct cgc tac act act cct gag gat gct act ccc gag ccc gga gag				960
103	Phe Ala Arg Tyr Thr Thr Pro Glu Asp Ala Thr Pro Glu Pro Gly Glu				
104		305	310	315	
106	gac cca cgc gtg acc cgg gcc aag tac ttc att cga gat gag ttt ctg				1008
107	Asp Pro Arg Val Thr Arg Ala Lys Tyr Phe Ile Arg Asp Glu Phe Leu				
108		320	325	330	
110	agg atc agc act gcc agt gga gat ggg cgt cac tac tgc tac cct cat				1056
111	Arg Ile Ser Thr Ala Ser Gly Asp Gly Arg His Tyr Cys Tyr Pro His				
112		335	340	345	
114	ttc acc tgc gct gtg gac act gag aac atc cgc cgt gtg ttc aac gac				1104
115	Phe Thr Cys Ala Val Asp Thr Glu Asn Ile Arg Arg Val Phe Asn Asp				
116		350	355	360	
118	tgc cgt gac atc att cag cgc atg cac ctt cgt cag tac gag ctg ctc				1152
119	Cys Arg Asp Ile Ile Gln Arg Met His Leu Arg Gln Tyr Glu Leu Leu				
120		365	370	375	380
122	taa gaaggggaacc cccaaattta attaaagcct taagcacaat taattaaaag				1205
124	tgaaacgttaa ttgtacaagc agttaatcac ccaccatagg gcatgattaa caaagcaacc				1265
126	tttcccttcc cccgagtgat tttagcaaac ccccttttcc ottcagcttg cttagatggt				1325

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128 ccaaatattg aaagcttaag gcggcctaca gaaaaaggaa aaaaggccac aaaagttccc 1385
130 tctcaatttc agtaaaaaata aataaaacag cagcagcaaa caaataaaat gaataaaaag 1445
132 aaacaaatga aataaatatt gtgtgtgca gcattaaaaa aaatcaaaat aaaaattaaa 1505
134 tgtgagcaaa g 1516
136 <210> SEQ ID NO: 2
137 <211> LENGTH: 21
138 <212> TYPE: DNA
139 <213> ORGANISM: Artificial Sequence
141 <220> FEATURE:
142 <223> OTHER INFORMATION: PCR Primer
144 <400> SEQUENCE: 2
145 cagtgagat gggcgctcact a 21
147 <210> SEQ ID NO: 3
148 <211> LENGTH: 21
149 <212> TYPE: DNA
150 <213> ORGANISM: Artificial Sequence
152 <220> FEATURE:
153 <223> OTHER INFORMATION: PCR Primer
155 <400> SEQUENCE: 3
156 atgtcacggc agtcgttgaa c 21
158 <210> SEQ ID NO: 4
159 <211> LENGTH: 25
160 <212> TYPE: DNA
161 <213> ORGANISM: Artificial Sequence
163 <220> FEATURE:
164 <223> OTHER INFORMATION: PCR Probe
166 <400> SEQUENCE: 4
167 tgctaccctc atttcacctg cgctg 25
169 <210> SEQ ID NO: 5
170 <211> LENGTH: 19
171 <212> TYPE: DNA
172 <213> ORGANISM: Artificial Sequence
174 <220> FEATURE:
175 <223> OTHER INFORMATION: PCR Primer
177 <400> SEQUENCE: 5
178 gaagggtgaag gtcggagtc 19
180 <210> SEQ ID NO: 6
181 <211> LENGTH: 20
182 <212> TYPE: DNA
183 <213> ORGANISM: Artificial Sequence
185 <220> FEATURE:
186 <223> OTHER INFORMATION: PCR Primer
188 <400> SEQUENCE: 6
189 gaagatggtg atgggatttc 20
191 <210> SEQ ID NO: 7
192 <211> LENGTH: 20
193 <212> TYPE: DNA
194 <213> ORGANISM: Artificial Sequence
196 <220> FEATURE:

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Input Set : A:\EP.txt
 Output Set: N:\CRF3\07172002\J018228A.raw

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197 <223> OTHER INFORMATION: PCR Probe
199 <400> SEQUENCE: 7
200   caagcttcgcc gttctcagcc           20
202 <210> SEQ ID NO: 8
203 <211> LENGTH: 20
204 <212> TYPE: DNA
205 <213> ORGANISM: Artificial Sequence
207 <220> FEATURE:
208 <223> OTHER INFORMATION: Antisense Oligonucleotide
210 <400> SEQUENCE: 8
211   tgccttctca ctgtctccat           20
213 <210> SEQ ID NO: 9
214 <211> LENGTH: 20
215 <212> TYPE: DNA
216 <213> ORGANISM: Artificial Sequence
218 <220> FEATURE:
219 <223> OTHER INFORMATION: Antisense Oligonucleotide
221 <400> SEQUENCE: 9
222   ttgccttctc actgtctcca           20
225 <210> SEQ ID NO: 10
226 <211> LENGTH: 20
227 <212> TYPE: DNA
228 <213> ORGANISM: Artificial Sequence
230 <220> FEATURE:
231 <223> OTHER INFORMATION: Antisense Oligonucleotide
233 <400> SEQUENCE: 10
234   gttgccttct cactgtctcc           20
236 <210> SEQ ID NO: 11
237 <211> LENGTH: 20
238 <212> TYPE: DNA
239 <213> ORGANISM: Artificial Sequence
241 <220> FEATURE:
242 <223> OTHER INFORMATION: Antisense Oligonucleotide
244 <400> SEQUENCE: 11
245   gggtgccttc tcactgtctc           20
247 <210> SEQ ID NO: 12
248 <211> LENGTH: 20
249 <212> TYPE: DNA
250 <213> ORGANISM: Artificial Sequence
252 <220> FEATURE:
253 <223> OTHER INFORMATION: Antisense Oligonucleotide
255 <400> SEQUENCE: 12
256   tgggtgcctt ctcaactgtct           20
258 <210> SEQ ID NO: 13
259 <211> LENGTH: 20
260 <212> TYPE: DNA
261 <213> ORGANISM: Artificial Sequence
263 <220> FEATURE:
264 <223> OTHER INFORMATION: Antisense Oligonucleotide

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266 <400> SEQUENCE: 13
267   ctttggtgc cttctcactg
269 <210> SEQ ID NO: 14
270 <211> LENGTH: 20
271 <212> TYPE: DNA
272 <213> ORGANISM: Artificial Sequence
274 <220> FEATURE:
275 <223> OTHER INFORMATION: Antisense Oligonucleotide
277 <400> SEQUENCE: 14
278   gtgaaatgag ggtagcagta
280 <210> SEQ ID NO: 15
281 <211> LENGTH: 20
282 <212> TYPE: DNA
283 <213> ORGANISM: Artificial Sequence
285 <220> FEATURE:
286 <223> OTHER INFORMATION: Antisense Oligonucleotide
288 <400> SEQUENCE: 15
289   aggtgaaatg agggtagcag
291 <210> SEQ ID NO: 16
292 <211> LENGTH: 20
293 <212> TYPE: DNA
294 <213> ORGANISM: Artificial Sequence
296 <220> FEATURE:
297 <223> OTHER INFORMATION: Antisense Oligonucleotide
299 <400> SEQUENCE: 16
300   caggtgaaat gagggtagca
302 <210> SEQ ID NO: 17
303 <211> LENGTH: 20
304 <212> TYPE: DNA
305 <213> ORGANISM: Artificial Sequence
307 <220> FEATURE:
308 <223> OTHER INFORMATION: Antisense Oligonucleotide
310 <400> SEQUENCE: 17
311   gcaggtgaaa tgagggtagc
313 <210> SEQ ID NO: 18
314 <211> LENGTH: 20
315 <212> TYPE: DNA
316 <213> ORGANISM: Artificial Sequence
318 <220> FEATURE:
319 <223> OTHER INFORMATION: Antisense Oligonucleotide
321 <400> SEQUENCE: 18
322   cgcaggtgaa atgagggtag
324 <210> SEQ ID NO: 19
325 <211> LENGTH: 20
326 <212> TYPE: DNA
327 <213> ORGANISM: Artificial Sequence
329 <220> FEATURE:
330 <223> OTHER INFORMATION: Antisense Oligonucleotide
332 <400> SEQUENCE: 19

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VERIFICATION SUMMARY

DATE: 07/17/2002

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Input Set : A:\EP.txt

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L:9 M:283 W: Missing Blank Line separator, <130> field identifier

L:11 M:270 C: Current Application Number differs, Replaced Current Application No

L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date